

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-6, 8-16, 18 and 37-49 are pending in the present application. Claims 7, 17 and 19-36 have been canceled, Claims 1-2, 4, 10-12, 16 and 18 have been amended, and Claims 37-49 have been added by the present amendment.

In the outstanding Office Action, the specification was objected to; Claims 17 and 26 were objected to; Claims 17, 18, 25 and 36 were rejected under 35 U.S.C. § 112, second paragraph; Claims 1-3, 5-10, 13, 15, 17, 18, 26 and 30 were rejected under 35 U.S.C. § 102(b) as anticipated by Osamu et al.; Claims 1-3 and 26-28 were rejected under 35 U.S.C. § 102(b) as anticipated by Wallace et al.; Claims 1-4, 12, 13, 15, 19, 20, 23, 25-32, 34 and 36 were rejected under 35 U.S.C. § 102(e) as anticipated by Ohno et al.; Claims 11 and 21 were rejected under 35 U.S.C. § 103(a) as unpatentable over Ohno et al.; Claims 14, 22 and 23 were rejected under 35 U.S.C. § 103(a) as unpatentable over Ohno et al. in view of Nakatani et al.; and Claims 16, 24 and 35 were rejected under 35 U.S.C. § 103(a) as unpatentable over Ohno et al. in view of Bosserman et al.

Regarding the objection to the specification, the specification has been amended in light of the comments noted in the outstanding Office Action. In addition, the title on the specification has been amended to correspond with the title on the Official Filing Receipt. Accordingly, it is respectfully requested this objection be withdrawn.

Claims 17 and 26 have been canceled, and accordingly the objection to Claims 17 and 26 is moot.

Regarding the rejection of Claims 17, 18, 25 and 36 under 35 U.S.C. § 112, second paragraph, the appropriate claims have been amended in light of the comments noted in the

outstanding Office Action. Accordingly, it is respectfully requested this rejection be withdrawn.

Claims 1-3, 5-10, 13, 15, 17, 18, 26 and 30 stand rejected under 35 U.S.C. § 102(b) as anticipated by Osamu et al. This rejection is respectfully traversed.

Amended Claim 1 is directed to a method of manufacturing a flat panel display including depositing a metal back layer on a faceplate having a phosphor layer formed on a substrate, depositing a getter film made of evaporable getter material on the metal back layer on the phosphor layer without exposing the getter film to an oxidizing atmosphere, disposing the faceplate with the getter film facing a rear plate having an electron source to form a gap, and hermetically sealing the gap. Amended independent Claim 2 recites similar features.

In a non-limiting example, Figures 1A, 1B and 1C illustrate a method of manufacturing a flat panel display according to the present invention. The display in this example includes a phosphor layer 12 formed on a transparent substrate such as a glass substrate 11. On the phosphor layer 12, the metal back layer 14 is formed. The metal back layer 14 is made of a conductive thin film such as an Al film. The rear plate 20 includes electron emitters 22 formed on an insulating substrate 21. The support frame 30 hermetically seals a space between the face plate 10 and the rear plate 20. While maintaining a vacuum, a getter film made of evaporable getter material is deposited on the metal back layer 14 without exposing the getter film to an oxidizing atmosphere.

The metal back 14 reflects, among light emitted in the phosphor layer 12, light that proceeds in a direction of the rear plate 20 having an electron source, resulting in an improvement of the brightness. Furthermore, the metal back 14 gives a conduction to the image display area of the faceplate 10 to suppress electricity from building up there, playing a role of an anode electrode to the electron source of the rear plate 20 (see page 13, lines 2-6).

In addition, getter film deposition in a vacuum atmosphere results in a flat panel display that can maintain a better vacuum state (see page 22, lines 8-23).

Osamu et al. discloses a flat type display device including a front side panel 10 having a fluorescent screen 12 and a getter 19. Osamu et al., however, does not disclose a metal back layer on the fluorescent screen. Thus, Osamu et al. does not teach or suggest depositing a getter film made of evaporable getter material on the metal back layer without exposing the getter film to an oxidizing atmosphere. Accordingly, it is respectfully requested this rejection be withdrawn.

Claims 1-3 and 26-28 stand rejected under 35 U.S.C. § 102(b) as anticipated by Wallace et al. This rejection is respectfully traversed.

Wallace et al. discloses a flat panel display including an anode plate having a luminescent material 24 and a getter material 29 on a substrate 26. Wallace et al., however, does not disclose a metal back layer on the luminescent material. Thus, Wallace et al. also does not teach or suggest depositing a getter film made of evaporable getter material on the metal back layer without exposing the getter film to an oxidizing atmosphere. Accordingly, it is respectfully requested this rejection also be withdrawn.

Claims 1-4, 12, 13, 15, 19, 20, 23, 25-32, 34 and 36 stand rejected under 35 U.S.C. § 102(e) as anticipated by Ohno et al. This rejection is respectfully traversed.

Ohno et al. discloses an image display apparatus including a face plate having a fluorescent film 7, a metal back, and a getter layer 9 on a glass substrate. In Ohno et al., the getter material is deposited in the ordinary panel process and exposed to an oxidation atmosphere (see column 8, lines 63-65, column 9, lines 14-17 and lines 26-27). As a result, the getter material is inevitably oxidized in its surface. Since the degree of surface activity of the getter material is particularly important, the getter material oxidized in its surface cannot exhibit a satisfying gas adsorption effect. Thus, Ohno et al. does not disclose depositing a

getter film made of evaporable getter material on the metal back layer without exposing the getter film to an oxidizing atmosphere. Accordingly, it is respectfully requested this rejection also be withdrawn.

Claims 11 and 21 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Ohno et al. This rejection is respectfully traversed.

Claim 11 depends indirectly from independent Claim 1, which as discussed above is believed to patentably distinguish over Ohno et al., and Claim 21 has been canceled. Accordingly, it is respectfully requested this rejection also be withdrawn.

Claims 14, 22 and 23 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Ohno et al. in view of Nakatani et al. This rejection is respectfully traversed.

Claim 14 depends on independent Claim 1, which as discussed above is believed to be allowable, and Claims 22 and 23 have been canceled. Further, Nakatani et al. discloses a flat display including a rear plate 21 having fluorescent layer 8 and a getter plate 26. Nakatani et al., however, does not disclose a metal back layer on the luminescent material. Thus, Nakatani et al. also does not disclose depositing a getter film made of evaporable getter material on the metal back layer without exposing the getter film to an oxidizing atmosphere. Accordingly, it is respectfully requested this rejection also be withdrawn.

Claims 16, 24 and 35 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Ohno et al. in view of Bosserman et al. This rejection is respectfully traversed.


Claim 16 depends indirectly on independent Claim 1, which as discussed above is believed to be allowable, and Claims 24 and 35 have been canceled. Further, it is respectfully submitted that Bosserman et al. also does not teach or suggest the features recited in the independent claims. Accordingly, it is respectfully requested this rejection also be withdrawn.

In addition, new Claims 37-49 have been added to set forth the invention in a varying scope and Applicants submit the new claims are supported by the originally filed specification. In particular, new Claims 37 and 38 depend on Claims 1 and 2, respectively, and are supported by the specification at page 19, lines 3-7; new Claims 39 and 40 depend on Claims 1 and 2, respectively, and are supported by the specification at page 13, lines 12-16; and Claims 41-49 are similar to Claims 3-6, 8, 9, 13, 14 and 18, respectively, and depend on Claim 2. It is believed no new matter has been added. Accordingly, it is respectfully submitted new Claims 37-42 are allowable for similar reasons as discussed above.

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully Submitted,

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